Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	
Recommendations of the Independent Panel	)	EB Docket No. 06-119
Reviewing the Impact of Hurricane Katrina on	)	WC Docket No. 06-63
Communications Networks	)	
	)	

To: The Commission

PETITION FOR RECONSIDERATION

The DAS Forum

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FILED BY THE DAS FORUM

The DAS Forum[1] – a national association dedicated to furthering the understanding of the particular issues associated with deployment of distributed antenna systems (DAS), pursuant to Section 1.106 of the Commission's rules, submits this Petition for Reconsideration. The DAS Forum agrees with and supports the comments filed by PCIA-The Wireless Infrastructure Association ("PCIA"). PCIA filed comments in support of two motions to stay the Commission's new back-up power rule (as codified at 47 C.F.R. § 12.2) for all assets normally powered by local commercial AC power, including cell sites.[2]

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[1] The DAS Forum, a membership section of PCIA, is the only national network of leaders focused exclusively on shaping the future of DAS as a viable complement to traditional macro cell sites and a solution to the deployment of wireless services in challenging environments. See www.thedasforum.org. The DAS Forum is an avenue to further facilitate the deployment of widespread dependable communications networks across the country, consistent with the mandate of the Telecommunications Act of 1996.

[2] *See* Motion for Administrative Stay of CTIA – The Wireless Association ("CTIA"), EB Docket No. 06-119 (filed July 31, 2007) ("CTIA Motion"); NextG Networks, Inc. ("NextG") Request for Partial Stay of Commission's Back Up Power Rule, EB Docket

The DAS Forum membership includes virtually every DAS provider, as well as several CMRS carriers currently deploying DAS as part of their networks and many wireless industry infrastructure representatives. As such, the DAS Forum has a substantial vested interest in this matter as it affects back-up power at DAS cell sites and other locations. The DAS Forum is an appropriate party to this proceeding because the Commission's new back up power rule will place DAS Forum members who use or build DAS Networks in jeopardy of immediate non-compliance—compliance which in many cases is impossible due to leasing or permitting requirements or would come at great expense to DAS network builders. The additional costs imposed will slow down the development and use of these crucial networks since the design will have to be re-engineered to comply with the new rule and costs will materially increase. The DAS Forum did not participate in the earlier stages of this proceeding because there was no indication that a back up power rule would be issued. If the DAS Forum knew that the outcome would be an absolute rule, its members would have been involved from the beginning of the process.

Certainly, the DAS Forum recognizes and appreciates the Commission's ongoing efforts to implement new avenues to enhance disaster preparedness, network reliability and first-responder communications. Hurricane Katrina and the events of 9/11 made clear the need to address these items So, while the DAS Forum supports the Commission's focus on these issues, it is concerned that the new emergency back-up power rule could have several unintended adverse results. The DAS Forum is fully

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No. 06-119 (filed July 31, 2007) ("NextG Request"); *see also Recommendations of the Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks*, Order, FCC 07-107, ¶ 77 (rel. June 8, 2007) ("Order"); 47 C.F.R. § 12.2.

supportive of the grant of a stay of the new rule and agrees with and supports the positions stated by NextG that DAS deployment merits special consideration with regard to backup requirements due to unique attributes of a DAS system.

DISCUSSION

In the Order, the Commission established a "back-up power rule," which states that "LECs and CMRS providers should maintain emergency back-up power for a minimum of 24 hours for assets inside central offices and eight hours for cell sites, remote switches and digital loop carrier system remote terminals that are normally powered from local AC commercial power."[3] The new rule was to have been effective on August 10, 2007 until the Commission issued a stay on August 2, 2007.

A DAS network is a highly innovative and unique deployment. It is used in situations where traditional applications will not work, such as the French Quarter in New Orleans, or in a high end suburban area, such as Fairfax County, Virginia.[4] Mainstream DAS networks are a nascent segment of the wireless infrastructure industry, showing great promise as a way to bring highly focused service to areas that require an innovative solution. A DAS network usually consists of various "node" sites on existing telephone, light or traffic poles, connected by fiber and routed back to a remote equipment "hub." This type of network, because it can be designed to fit into small constrained areas using existing infrastructure, has the ability to provide voice, data and public safety services in an unobtrusive way to those areas where a more traditional cell site is not feasible. Given

[3] 47 C.F.R. § 12.2; *see Order* at ¶ 77.

[4] See *Declaration of Michael Kavanagh in Support of the DAS Forum Petition for Reconsideration,* August 10, 2007

the type of design and where these networks are generally placed, space is at a premium and equipment is compact.

A DAS network functions like a series of small cell sites. A benefit to this type of design is that when one node is damaged or goes off-air, the balance of the DAS network stays on-air. Coverage is lost in very small spots in that situation, not across the ½ to 1 mile or more that happens when a traditional cell site is damaged or off-air. The impact due to a loss of power to portions of a DAS network is generally far less than the impact created by loss of power to a cell site.

The DAS Forum is concerned that the rule lacks a reasoned basis and record support.[5] In the Order, the Commission considered the Katrina Panel's recommendation to *encourage* the implementation of three best practices issued by the Network Reliability and Interoperability Council ("NRIC").[6] The Commission expressly agreed with the goals underlying the first two proposals[7] and, citing the absence of record support for mandates, recommended only that these best practices be encouraged. Nevertheless, the Commission took NRIC's third best practice recommendation – that "service providers, network operators and property managers should ensure availability of emergency/backup power" – and imposed an 8 hour back-up power mandate.

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[5] *See* CTIA Motion at 11-21; 5 U.S.C. § 706; *see also Motor Vehicles Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) ("The agency must examine the relevant data and articulate a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made.") (quoting *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962); *Home Box Office, Inc. v. FCC*, 567 F.2d 9, 35 (D.C. Cir. 1977) (an agency "must disclose in detail the thinking that has animated the form of a proposed rule and the data upon which that rule is based").

[6] *See* Order at ¶ 74.

[7] These two best practice proposals call for (i) placing 911 circuits over diverse interoffice transport facilities and (ii) establishing alternative methods of communication for critical personnel. *See id.*

The Commission based the back-up power rule upon the comments of two parties: the National Emergency Number Association ("NENA"), which recommended that in the *wireline* context, "all telephone central offices [should] have an emergency back-up power source,"[8] and St. Tammany Parish Communications District 1, which suggested that wireline and wireless providers "have backup *procedures* in place."[9] Throughout these and other comments, however, there is no discussion of, or support expressed for, a back-up power requirement at cell sites or other assets and certainly not at DAS networks. Significantly, the record also lacks any discussion on the timing for such a requirement. Indeed, the Order offers no basis for the 8-hour mandate.[10] Had there been further consideration of this requirement, it is likely that the significant burden upon CMRS and other providers, as well as the potential conflicts with other federal, state and local laws, would have been explored.[11] DAS network builders are subject to specific and detailed environmental and permitting requirements at the local, state and federal level. The rule, as promulgated without the considered input of the DAS network builders, puts those networks at odds and out of compliance with many of the permitting requirements that are already in place. In fact, in many situations, complying with the

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[8] *See* Comments of NENA, EB Docket No. 06-119 at 6 (filed Aug. 6, 2006).

[9] *See* Comments of St. Tammany Parish Communications District 1, EB Docket No. 06-119 at 2 (filed Aug. 4, 2006) (emphasis added). The Order also references the comments of AT&T and Verizon, but those comments refer to back-up power in wireline central offices and *critical* components of the network. *See* Comments of AT&T, EB Docket No. 06-119, at 13 (filed Aug. 7, 2006); Comments of Verizon, EB Docket No. 06-119, at 7 (filed Aug. 7, 2006).

[10] *See, e.g., Telocator Network of America v. FCC*, 691 F.2d 525, 549-50 (D.C. Cir. 1982) (predictive judgment must have "ascertainable foundation in the record" showing "thoughtful consideration duly attentive to the comments received"); *Cincinnati Bell Telephone Co. v. FCC*, 69 F.3d 752, 760 (6th Cir. 1995) (predictive judgment without record support is "highly suspect").

[11] *See generally* CTIA Motion.

rule puts the DAS network builder at complete odds with the local and state requirements and leaves them in an untenable situation.

Additionally, the DAS Forum is concerned that interested parties did not have adequate notice that the FCC was considering the adoption of an 8-hour back-up power mandate.[12] The Katrina NPRM did not suggest that a back-up power mandate could be forthcoming and did not invite input on the duration for which emergency power should be made available at cell sites.[13] Rather, the NPRM asked only for input on the "availability of emergency back-up power capabilities."[14] If a back up power rule was stated as an outcome of the NPRM, DAS network builders would have provided input on current practices and standards for back up power which would have allowed for a rule tailored to the type of site, network and location and would have allowed the rule to work with existing laws governing DAS networks.

The lack of adequate notice is evidenced by the absence of valuable input from CMRS carriers, tower companies and rooftop management companies or other interested parties, such as DAS builders about the many unintended consequences such a rule could have. Had the industry been aware, they would have advised the Commission that the back-up power rule would create a situation where compliance is practically impossible. First, as a practical matter, providing 8 hours of back-up power at DAS sites will require

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[12] *See* CTIA Motion at 12; 5 U.S.C. § 553(b)(3) (agencies must provide notice of proposed rulemaking that includes "either the terms of substance of the proposed rule or a description of the subjects and issues involved.").

[13] *See Recommendations of the Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks*, Notice of Proposed Rulemaking, EB Docket No. 06-119, 21 FCC Rcd 7320, 7326 ¶ 16 (2006) ("Katrina NPRM").

[14] *See id.*

a dramatic and burdensome commitment of resources.[15] The sheer quantity of generators, batteries and hours of labor is significant by any estimation and impossible to deploy in advance of the Commission's deadline.[16] Equally important, the rule overlooks the placement circumstances of many macro and DAS cell sites. In order to provide ubiquitous service with minimal impact as required by local law and the general public, cell sites are often placed on roof-tops, lamp-posts, power poles, water towers, and in stealth configurations. Many of these sites are difficult to access and/or simply cannot support additional equipment including that needed for back-up power supply. DAS sites are especially challenged by the addition of new or larger backup battery equipment since DAS sites are specifically configured to be located in compact environments, often on structures where there is limited or no ground space such as power or telephone poles or in tight residential spaces. The DAS technology enables enhanced wireless coverage in locations, such as residential areas or dense urban cores, where full macro cell sites are not permitted, have been denied or where there is insufficient ground space to deploy. Thus, by design DAS sites involve equipment considerably smaller than that used at macro cell sites. Further, many local zoning codes and approvals, such as the required SHPO approvals, restrict the size of the DAS equipment to small configurations that prevent the placement of larger batteries or generators[17]. There has been considerable tension between wireless infrastructure builders and municipalities over the placement of

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[15] *See* NextG Request at 11. Separately, CTIA has indicated that compliance could endanger wireless providers' present and future debt financing arrangements because of the consequences attendant non-compliance. *See* CTIA Motion at 33-34.

[16] *See* CTIA Motion at 22-32, Exs. 1-5.

[17] Fairfax County, VA (**Fairfax County Zoning Code Section 2.514(2) (A.)(3)**) where the maximum size is twenty (20) cubic feet in volume or five (5) feet in height when on or adjacent to the pole.

wireless networks since the beginning of the industry. Municipalities have put constant pressure on infrastructure builders to build unobtrusive networks that take up very little room and have little visual impact. This pressure, when coupled with the ever increasing demand on carriers to provide more services and greater service capacity, has led to smaller sites that cannot accommodate generators or other back up power equipment. In fact, even if municipalities were shown that such back up power was in fact necessary, they would likely be unwilling to grant the permits to allow it to be placed in the streets and right of ways where outdoor DAS networks are currently built. Picture a scenario where a network builder requested permission to place several hundred pounds of batteries on a New York City side walk next to a node on a street pole in order to comply with the back up power rule. Multiply this scenario times fifty to sixty nodes located in a large urban area. Not only would the municipality not allow it, the safety and security issues that would ensue would be insurmountable.

In-building DAS systems, such as those in convention centers, hotels and casinos, and those being deployed in subway systems will face substantial resistance from landlords if existing facilities have to be retrofitted with battery or generators to meet the requirement. An in-building DAS system places nodes on the wall or in the ceilings; there is no room to place a back up power source near the node. The equipment rooms are squeezed into generally un-leaseable space, which is small and difficult to access. If back up power in the amount required to comply with the back up power rule were installed in a location like a subway platform or an airport, it would impede the movement of passengers and like the outdoor situation, create security and safety issues in areas that already have heightened security issues.

Furthermore, the rule will unnecessarily implicate or bring DAS site owners into conflict with existing regulation. As CTIA notes, nationwide fire codes, state and local building codes, noise abatement rules, permitting laws and federal environmental regulation are implicated by the installation of the generators and 600-1000 pound batteries that are necessary to comply with the requirement.[18] Another area of concern is whether the many school, parks and public property sites will allow generators on site to meet this mandate. Carriers will face increased resistance and even violate the terms of their agreements at the local level (*i.e.* permitting, building, leasing, state compliance).[19]

CONCLUSION

For the foregoing reasons, the DAS Forum respectfully requests reconsideration of the eight hour back-up power rule, 47 C.F.R. § 12.2.

Respectfully submitted,

The DAS Forum

By: /s/ Michael Fitch

By: /s/ Connie Durcsak

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[18] *See* CTIA Motion at 22-32; *see also* NextG Request at 9-10.
[19] *See* CTIA Motion at 26; *see also* NextG Request at 10.

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To: The Commission

DECLARATION OF MICHAEL KAVANAGH IN SUPPORT OF THE DAS FORUM PETITION FOR RECONSIDERATION

1. My name is Michael Kavanagh, and I am Chief Executive Officer of NewPath Networks, LLC ("NewPath"). My responsibilities at NewPath include network design and compliance, interactions with utilities and pole owners and all aspects of approvals. I am intimately involved in the logistical and economical aspects of NewPath's networks. NewPath is a member of The DAS Forum – The Distributed Antenna Systems ("DAS") Forum.

2. This affidavit is intended to support the *Motion for Reconsideration* filed by The DAS Forum in the referenced dockets. Like The DAS Forum, NewPath commends the Commission and staff for addressing problems and issues identified following the disastrous losses from Hurricane Katrina. NewPath and The DAS Forum support efforts to enhance disaster preparedness, network reliability and first-responder communications. However, our

concern is that the new emergency back-up power rule could have several unintended adverse results, particularly on DAS providers like NewPath and other members of The DAS Forum. NewPath and the DAS Forum agree with and support the positions stated by NextG that DAS deployment merits special consideration with regard to backup requirements due to unique attributes of a DAS system.

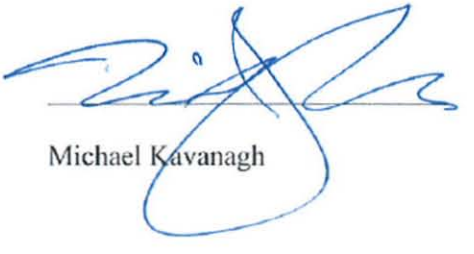
3. NewPath is presently installing a DAS network in the French Quarter, New Orleans, an area heavily impacted by the destruction of Katrina. In order to secure approvals for this system, NewPath underwent significant scrutiny and negotiated concessions with the Vieux Carre Commission. The resulting design is custom-built light poles with interior electronics and small antennas. For each of the fourteen (14) nodes of this particular DAS network, space is at an absolute premium. There is no associated ground equipment or pedestal to accommodate additional equipment such as battery back-up or generator, nor would such facilities gain approval from the Vieux Carre Commission.

4. The DAS network NewPath designed for New Orleans includes a "hub" facility which is located off-site and out of the French Quarter. It may be possible to secure approvals from the landlord and from zoning to meet the back-up requirements imposed by the FCC, however the hub was not designed or permitted to meet these requirements.

5. NewPath was recently approved to construct a DAS network in Fairfax County, Virginia along Hunter Mill Road. Hunter Mill is a designated scenic by-way under the Commonwealth of Virginia, Department of Historic Resources, and is eligible for listing under the National Register of Historic Places. In addition to issues associated with historic attributes, Hunter Mill Road is narrow and windy. Fairfax County conducted a rigorous review of the DAS as proposed, and several design concessions had to be made to accommodate the county. Over objections from neighbors, the DAS system was approved. Fairfax County would never have approved the large, obtrusive cabinets and/or pedestals necessary to house back-up batteries as required under the order.

6. Like the New Orleans DAS, the hub connected to the Hunter Mill system is located off-site in a commercial building. However, the hub was not leased, designed or permitted to accommodate the additional batteries and/or generators necessary to meet the proposed back-up requirements.

I declare under penalty of perjury that the statements contained in this Declaration are true and correct.



Michael Kavanagh

August 10, 2007